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ABSTRACT

To investigate the cognitive, affective, and behavioral responses to a public information campaign concerning a city-wide smoking ordinance, a study conducted a telephone survey of 4500 randomly selected Dallas, Texas residents (netting 374 usable surveys) during a two-week period in November, 1986. The smoking ordinance required Dallas restaurants with 50 or more tables to set aside an unspecified number of tables for nonsmokers. Also, smoking was prohibited in restaurant restrooms and cashier areas, elevators, theaters, and specified hospital rooms. The telephone survey contained 38 questions measuring citizen awareness, knowledge, attitudes, and opinions about the smoking ordinance. Results revealed that city residents reported a fairly high level of awareness about the smoking ordinance, although the majority of respondents performed poorly on an eight-item true-false test covering various aspects of the ordinance. Respondents generally supported the ordinance as a whole, but were indifferent or opposed to the "enforcement" aspects of the ordinance. Also, respondents were not supportive of the current enforcement aspects of the ordinance, and did not support enforcement by police or city officials who issue tickets. (Four tables of data are appended.) (MM)

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POST SURVEY USE WITH A PUBLIC INFORMATION CAMPAIGN

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POST SURVEY USE WITH A PUBLIC INFORMATION CAMPAIGN

ABSTRACT

This study describes the use of a post telephone survey as a measure of the results of a public information campaign to implement a city-wide smoking ordinance. Variables reflect communication-theory building that suggests the three-stage cognition, attitude, behavior hierarchy of communication effects and schema-based studies. Results indicate that by assessing such variables as awareness, attitude, and opinion, and especially respondent recall and involvement, that future public information campaigns could be more effectively shaped.

Recently public officials have been able to cite substantial research to show just how serious the effects of passive smoking, that is breathing someone else's tobacco smoke, are to nonsmokers. Donald Shopland, head of the Office of Smoking and Health in the Centers for Disease Control predicted that "proof is accumulating on passive smoking just as it has on active smoking," (Otten, 1986). Surgeon general Dr. C. Everett Koop reported National Academy of Sciences research estimates that passive smoking caused 2400 cancer deaths annually ("Surgeon general links passive smoking to cancer," 1986). The Academy noted also that young children with parents who smoke are likely to develop respiratory illnesses twice as often as children living with nonsmoking parents. In sum, there is clear evidence that there are serious health risks to nonsmokers who breathe others' tobacco smoke.

While this evidence should draw public attention to the serious health risks to the millions of nonsmokers who have heretofore been uninterested in smoking and smoking restrictions, it is unclear how much this information has persuaded citizens to support various governmental "passive smoking" laws. One estimate suggested that only "dozens" (Kelley, 1985) of cities have adopted ordinances restricting smoking in public places because of the harmful effects to nonsmokers. No studies have measured citizen reaction to or support for these local smoking ordinances.

One city to join the ranks of cities to adopt a smoking ordinance has been the City of Dallas. On February 6, 1986, Dallas restaurants with 50 or more seats were required to set aside an unspecified number of tables for nonsmokers. Smoking became prohibited in such common areas as restaurant

restrooms and cashier areas, elevators, theatres, and specified hospital rooms. Individuals who violated the law could be fined up to $200, but only after a citizen complaint was filed with the city prosecutor's office.

Upon adoption of the City's smoking ordinance, The City carried out information campaign efforts to inform Dallas citizens about the implementation of the smoking ordinance. Through the City Department of Health and Human Services, the City sought to inform citizens of the ordinance by inserting into City water bills brochures explaining the ordinance. Other specific audiences reached with information about the ordinance included the restaurant owners, who could be informed of the ordinance by public health inspectors, and reporters, who were provided information when they inquired and wrote stories about the ordinance.

Since the City of Dallas smoking ordinance's implementation, the City Department of Health and Human Services and the Dallas Environmental Health Commission, a city council advisory board, have monitored the ordinance's effect through counts of citizen phone inquiries and complaints and through reports of City health inspectors who routinely visit city restaurants. At approximately the six-month point, the Department had received and processed 96 complaints against various businesses (Wood, 1986). However, as of January 7, 1987, only three citations of restaurants had been issued and only one prosecution of an illegal smoker had been approved by the city attorney's office (Schutze, 1987).

This lack of legal action against violators of the City's smoking ordinance could, of course, be interpreted to mean that Dallas citizens had

become aware of the smoking ordiance, were complying with it, and felt that the ordinance was meeting their needs. On the other hand, it may also be evidence that citizens and businesses of Dallas had not become aware of the smoking ordinance or that they were not committed enough to its enforcement to obtain the names of potential violators and to file a complaint at city hall.

In August of 1986, the Department of Health and Human Services entered into a nonfinancial agreement with two public relations classes at a local university to conduct a smoking ordinance survey of city residents and to provide the results of the survey by the end of the Fall Semester (December 19, 1986). The Department of Health and Human Services' goal in conducting the survey was to learn whether the smoking ordinance "was working". The Department wanted to report the survey results by the first anniversary of the ordinance's implementation.

Because of the time and resource constraints involved in conducting the survey, the findings should be considered as preliminary results. Nevertheless, we believe that the results of this survey provide useful information to public relations researchers and practitioners who are considering the utility of public information campaigns.

RATIONALE AND RESEARCH QUESTIONS

Because the Department of Health and Human Services had limited information about citizen response to the Dallas smoking ordinance, it sought to learn the answers to the following questions:

1. Are city residents aware that the Dallas smoking ordinance exists?
2. Do city residents know about the various aspects of the ordinance?
3. Do city residents support the various aspects of the ordinance? Are they supportive of the ordinance as a whole?
4. Do they support any possible extensions of the ordinance?

The first two questions reflect a great deal of communication theory-building that suggests that before people can be persuaded to believe or do something, they must first "know" the pertinent information (Lionberger, 1960, Rogers and Agarwala-Rogers, 1976, and Grunig and Hunt, 1984). This "knowledge" has been described as "cognition" and this term broken into such stages as awareness and comprehension (Grunig and Hunt, 1984). The third question attempts to measure "attitudes" a second dimension generally regarded as operating in studying the effects of communication. The fourth research question attempts to measure "behavior", a third diemsnion generally regarded as operating in studying the effects of communication.

These three dimensions make up what is known as the hierarcy of communication effects model. While it is believed that it is too simplistic only to study these three dimensions in order to understand communication effects (Grunig and Hunt, 1984, 124-6), these three dimensions do provide theoretical and practical guides for assessing public communication campaign efforts.

Research Question #1: Are citizens aware of the ordinance?

We chose with the first question of whether citiens knew of the existence of the ordinance to ask for a forced-choice response -- did or did citizens not know that there was a city smoking ordinance. If citizens said "yes", they were asked how they had learned about the ordinance. The respondents were asked specifically if they remembered reading about the smoking ordinance from information in one of their previous water bills.

Research Question #2: Are citizens knowledgable about the various aspects of the ordinance?

As a follow up to this general measure of citizen "awareness" of the ordinance, we wanted to learn whether citizens comprehended or had knowledge of the various aspects of the ordinance. Did citizens know or could they recall the ordinance's various sections? If citizens could not recall the ordinance's enforcement section, for instance, the City would have better information as to why there had been so few formally-lodged citizen complaints. It was assumed that if citizens were not knowledgable, then they would not have much interest or affect in supporting or changing the ordinance.

The questions pertaining to citizen knowledge of the ordinance tested in true-false questions whether citizens knew of the various contexts where smoking was prohibited, such as restaurants, hospital patients' rooms and retail establishments; whether posted signs were required; and, who was to enforce the ordinance. We examined also whether there was a relationship between the knowledge citizens had about the ordinance and their general awareness of the ordinance.

Research Question #3: Do citizens support or oppose various aspects of the ordinance?

Third, we wanted to learn the attitudes that citizens had toward various aspects of the ordinance. The attitude concept focuses on the "affect", feelings, or evaluation of individuals toward information received and is a second dimension discussed in the hierarcy of effects model.

In this study, attitudes were defined as the degree of support or opposition expressed by citizens (i.e., Were citizens supportive of the ordinance as a whole? Did they support or oppose the prohibition of smoking in hospitals, retail establishments and restaurants? Did they support the posting of no smoking signs? Did they support the enforcement of the ordinance by citizen complaint only, etc?)

Research Question #4: Do citizens support any extensions of the ordinance?

Fourth, we wanted to learn whether citizens would support any changes in the ordinance. This research question was intended to measure a "behavioral dimension" of the respondents. What would citizens "allow" businessmen or the City to do with the city smoking ordinance. Questions focused primarily on the issues of restrictions and enforcement (i.e., Would citizens favor managers or owners of businesses reporting violators? Would citizens support city officials or the police in issuing tickets to violators. Would citizens support specific designations of space in restaurants for nonsmokers. Would citizens support restricting smoking in the workplace.)

In addition to studying the cognitive, affective, and behavioral responses, our study sought to reflect the literature that deals with schema-based studies (Schneider, 1985; and Grunig, 1982). Schneider provided a review of the concept of schemata or "internal cognitive structures that play a critical role in information processing," (p. 36). Schneider argued that in order to produce effective messages, we must learn more than whether a person is aware or knowledgable about an issue but also in what hierarchical order this information is held. For example, Grunig (1984), proposed that individuals will have cognitions about issues depending on whether they "need" the information, whether they feel "involved" in the issue, whether they think they can exert any personal control to help resolve the issue, and whether they think they have a solution to the issue (p. 167).

The literature on smoking did little to suggest any kind of hierarchical ordering of information except whether or not an individual smoked (Marwick, 1985). In addition to this smoking variable, we included a wide range of demographic information about the respondents -- residence, occupation, education, age, race, sex, and income. Other characteristics that we thought might affect citizen awareness, attitudes, and behavior included whether citizens worked in the city, whether there were smoking restrictions currently in their workplaces, whether they believed that breathing other people's smoke was harmful, and whether they had complained in the last month about someone smoking in a no smoking area to a manager or owner of a business or to a city official.

METHODS

Telephone Survey

A telephone survey approach to conducting this study was adopted for several reasons. First, a telephone survey was used because of the limited time that constrained the project. The Department of Health and Human Services needed to have the information before the end of the first year of the implementation of the smoking ordinance whereas the research classes were limited to one semester. The telephone survey required less time to complete than a mail questionnaire or face-to-face interview and resulted in a greater amount of data to be collected for the study.

Second, a telephone survey was used because of cost limitations. The cost of the survey was minimal since the Department of Health and Human Services telephones could be used after work hours. In addition, no postage, stationary, or transportation costs were needed. Thus, the only minor funds necessary to complete the study were costs to duplicate the telephone questionnaires and to provide refreshments for the student interviewers.

Finally, a telephone survey was used because student interviewers could be taught telephone interviewing skills in a relatively short amount of time. Training sessions were incorporated within the course schedule. In addition, since students were using telephones in one location, they could be easily supervised.

The telephone survey approach had some disadvantages. First, the choice

of five answers to the forced choice questions (i.e, "strongly support," "moderately support," etc.) was difficult for some respondents to understand even when students gave clarifying instructions over the telephone. Additionally, some respondents experienced confusion when they were asked to express their attitudes about the actual aspects of the ordinance after they had been "quizzed" about their knowledge of these aspects of the ordinance in the "true-false" part of the survey.

Survey Questionnaire

The telephone questionnaire contained 38 questions. The first three forced-choice questions measured citizen awareness. Citizens were asked whether they were aware of the ordinance or not and through what medium they had learned about the ordinance. They were specifically asked whether they had learned about the ordinance through their water bills. Knowledge was measured by eight forced-choice questions. These questions were phrased as true-false questions to learn what citizens remembered and understood about specific aspects of the ordinance. There were eight forced-choice questions concerning attitudes about specific aspects of the ordinance. Citizens were asked whether they strongly supported, moderately supported, felt indifferent, moderately opposed or strongly opposed specific aspects of the ordinance. Citizens were then asked to express their attitudes about the ordinance as a whole: whether they found it to be very effective, moderately effective, slightly effective or not at all effective. There were five forced-choice questions concerning opinions about extensions of the ordinance. These questions asked citizens whether they strongly

supported, moderately supported, felt indifferent, moderately opposed or strongly opposed extensions in the ordinance. Finally, there were 13 questions to obtain information on the demographic and background characteristics of citizens telephoned.

Computer-generated telephone numbers

In order to randomly select Dallas residents to be interviewed by telephone, we selected to computer generate Dallas telephone numbers. Using the 112 telephone prefixes listed in the Dallas telephone directory, we generated 25 random numbers per telephone prefix. This technique to randomly select telephone interview residents is significantly faster than the arduous task of randomly selecting numbers from the telephone book itself. The process of computer generating numbers also eliminates the bias stemming from the manner that people are listed or unlisted.

The principle disadvantage, however, to computer-generating random telephone numbers is a quite high "dross" rate, meaning that a relatively large number of telephone numbers must be dialed in order to reach one working household number. That is, there will be, according to some studies, as high as 20 percent of the numbers generated that are unusable (Bailey, 1982, p. 209). Computer-generated numbers will invariably include disconnected numbers, business numbers, car phones numbers, beepers, and hospital patient rooms.

For this study, approximately 4500 numbers were generated. A conservative estimate traced back to interviewer notes was that 1000 of these

numbers were unusable. The 3500 usable numbers should probably be reduced further because there were residents reached who did not speak English, residents who did not meet the criteria established of alternating interviewing respondents by gender, and residents were not at home during the established calling periods. While initial attempts were to dial numbers according to telephone prefixes so as to obtain geographical representativeness, this procedure proved to be too time-consuming, and interviewers were eventually given lists of 25 numbers with particular prefixes. Although this made the telephoning process much faster, the interviewers found that those residents who were most likely to be at home and to be willing to be interviewed represented certain rather than representative geographic areas.

Procedures

The telephone interviewing took place over a two-week period in November and included five separate telephone sessions. Four of the sessions were held between six and nine p.m. on November 5, 6, 10, and 11 in the Department of Health and Human Services offices. These night sessions were held so as to reach as many people as possible at home, therefore assuming that more people were at home in the evenings than during the day. Students attempted to call back numbers throughout the two weeks that were not answered from one evening to the next. A fifth session was held on Saturday morning, November 15; however, this session was primarily designed to assign students to track down numbers that had not been answered and they were given the following three days to do so.

The students were instructed to alternate between interviewing a male over the age of 18 years of age and then a female over the age of 18 years so as to avoid always interviewing the person in the household who typically answered the telephone for the household. Students were not to interview individuals found at business numbers.

RESULTS

The Sample

The sample included 374 usable completed survey instruments. Table 1 (see attached) presents the demographics of this sample in comparison with the demographics of city residents, as estimated by a 1982 updated census (Community Council, 1983).

As indicated in Table 1, certain demographic factors were well represented in our study whereas other factors were undersampled and oversampled. Regarding gender, the ratio of males to females in our sample compared favorably with census estimates. With respect to race, our sample underrepresented blacks. Regarding education, our study oversampled residents with higher levels of education and undersampled residents with lower levels of education. With respect to age, our sample underrepresented residents in the 55 and over age range. Finally, regarding income, our study undersampled residents with lower levels of income, though it is difficult to estimate how much we have underrepresented and overrepresented these residents.

In summary, the typical respondent to the telephone survey was white,

between the age of 25 to 34, with higher levels of education and household income than the average city resident. Typically, telephone interviewing does undersample minorities and those with lower income and education levels. The survey time frame did not allow interviewers to seek specifically blacks and Hispanics or those of specific ages, incomes, and education levels. It may be that requiring the interviewers to identify themselves as college students further reduced the interest of the underrepresented survey groups. More research should be conducted to the extent that the City of Dallas wishes to study a more representative sample that includes minorities.

Awareness

Are city residents aware of the smoking ordinance?

When asked whether or not they were aware of any ordinance restricting smoking in the city of Dallas, 76 percent of the sample reported that they were aware of the smoking ordinance while 24 percent reported that they were not aware of the ordinance (+ or - 5 percent). In general, then, city residents report a fairly high level of awareness.

Very few of the respondents had become aware of the smoking ordinance because they had read about in water bill inserts. Of the 76 percent who were aware of the ordinance, only two percent responded that they had read about the ordinance in their water bills. Instead, 14 percent reported learning about the ordinance in the newspapers, 34 percent through television, 27 percent by radio, nine percent by word-of-mouth, and 14

percent by "other" means.

Are different types of residents more aware of the ordinance than other types of residents?

As noted earlier, we examined awareness by a set of demographic characteristics including age, race, gender, education, income, smoking status, city of employment (Dallas or not Dallas), and belief in harmful effects of breathing other people's smoke. Of this set of independent variables, only smoking status was found to have a statistically significant relationship with awareness, (X^2 = 4.84, d.f.=1, p.$<$.05). Results indicated that some 52 percent of all of the respondents in the sample (185 of 357) were nonsmokers who were aware of the ordinance. However, it should be pointed out the 84 percent of all smokers (87 of 103) were aware while 73 percent of all nonsmokers (185 of 254) were aware of the ordinance. In sum, it appears that in our sample, a higher percentage of smokers were aware of the ordinance than nonsmokers. We should point out that although we found a significant relationship between smoking status and awareness, this relationship is not very strong. Indeed, a measure of association indicates that this relationship is weak (Phi=.12). In short, although smoking status and awareness are related, that relationship is weak.

As noted above, we did not find a significant relationship between awareness and a set of independent variables including age (x2=4.5, d.f.=4, p$>$.05), race (x2=5.0, d.f.=4, p$>$.05), gender (x2=0.0, d.f.=1, p$>$.05), education (x2=0.13, d.f.=3, p$>$.05), income (x2=8.0, d.f.=3, p$>$.05), city of employment (x2=1.3, d.f.=1, p$>$.05, and belief in harmful effects of breathing other

people's smoke ($x^2=0.0$, d.f.=1, $p>.05$. In short, different types of residents in our sample do not differ in their awareness of the city of Dallas smoking ordinance.

Knowledge

How knowledgeable are the respondents of aspects of the smoking ordinance?

As noted earlier, knowledge of the ordinance was measured by an eight-item true-false test covering various aspects of the ordinance, including the contexts covered by the ordinance and the enforcement procedures of the ordinance. In general, the respondents did not do well on this true-false test. The mean score was only 3.8 (with a standard deviation equal to 1.4), an average of less than 50 percent correct. Indeed, nearly 71 percent of the respondents (n=368) correctly answered four or less of the eight items. On the other hand, only one person correctly answered all eight items and only seven people (1.9 percent) correctly answered seven of eight items. In short, had we been "grading" this test, most people would have flunked.

A closer look at the items answered correctly and incorrectly, however, is revealing (see Table 2 attached). As noted earlier, four of the eight questions asked people about their understanding of the contexts where the the ordinance is applicable whereas three of the questions asked people about their understanding of the enforcement policy of the ordinance. As indicated in Table 2, most respondents correctly answered the "context" questions but

incorrectly answered the "enforcement" questions.

Are different types of residents more knowledgeable about the ordinance than other types of residents?

Again, we examined a set of demographic characteristics to determine if different types of residents were more knowledgeable about the ordinance than other types of residents. Among the characteristics analyzed were gender, education, income, smoking status, belief that other people's smoke is dangerous, city of employment (Dallas or not), and awareness.

We did not find a statistically significant relationship between level of knowledge and gender ($F=.06$. $p>.05$), education ($F=.28$. $p>.05$), smoking status ($F=2.5$. $p>.05$), and belief that breathing other people's smoke is harmful ($F=.87$. $p>.05$). In short, these characteristics do not help explain one's level of knowledge of the smoking ordinance.

We did, however, find a significant relationship between knowledge and awareness ($F=6.6$. . $p<.05$). Those who reported awareness were significantly more knowledgeable of the ordinance ($\bar{X}=3.9$, S.D.=1.3) than those who did not report awareness ($\bar{X}=3.4$, S.D.=1.6). Although there is a statistically significant difference between these two groups, the difference does not appear to be a substantial one.

We also found a significant relationship between knowledge and city of employment ($F=5.5$, $p<.05$). Respondents who work in the city of Dallas were significantly more knowledgeable about the ordinance ($\bar{X}=4.0$, S.D.=1.4) than people who do not work in Dallas ($\bar{X}=3.6$, S.D.=1.4). Again, while there is a

statistically significant difference, the difference between the two groups does not appear to be a very substantial difference.

Attitudes

Do residents of Dallas generally support or oppose the ordinance as a whole? Do different types of residents disagree over their support for or opposition to the ordinance?

As noted earlier, attitudes were measured on five-point scales ranging from strongly support (1) to strongly oppose (5). In general, city residents support the ordinance as a whole. The average score on the item which measured attitude about the ordinance as a while was 1.8 (with a standard deviation of 1.1). In other words, the average response to the ordinance as a whole was between strongly support and moderately support. Overall, 82 percent of the sample indicated their support for the ordinance as a whole whereas only nine percent felt indifferent and only nine percent opposed the ordinance as a whole (+ or - five percent). In sum, city residents generally support this ordinance as a whole.

Again, we examined the demographic factors to determine whether different groups of residents had divergent feelings about the ordinance as a whole. We found significant effects for only two factors: (1) smoking status ($F=23.2$. $p<.05$) and (2) belief that other people's smoke is harmful ($F=27.95$, $p<.05$). In particular, we found that nonsmokers were more supportive of the ordinance as a whole ($\bar{X}=1.6$, S.D.=.94) than smokers ($\bar{X}=2.3$, S.D.=1.2), and that people who believe that secondary smoke is harmful were

more supportive of the ordinance as a whole ($\overline{X}$=1.7, S.D.=.96) than those who do not believe that secondary smoke is harmful ($\overline{X}$=2.6, S.D.=1.3).

Which aspects of the ordinance do residents support?

Although the finding regarding the residents' attitude about the ordinance as a whole is useful, we also measured their attitudes about individual aspects of the ordinance. Table 3 (attached) presents the mean attitude ratings (with standard deviations) for each aspect of the ordinance. The table also offers the total percentage of support, indifference, and opposition to each of these aspects.

As you can see in Table 3, residents are generally supportive of the "context" aspects of the ordinance but are generally indifferent to the "enforcement" aspects of the ordinance. For example, all of the average ratings for the "context" aspects are between 1 and 2 (between strongly and moderately support) and over 80 percent of the sample indicated their support for each of these aspects. The aspects of the ordinance covering restaurants and hospitals seem to have received the most support in this study, with 91 percent of the sample supporting the requirement that restaurants have no smoking sections and 87 percent of the sample supporting the requirement that smoking be prohibited in hospital patient areas. Additionally, our sample indicated their support for the requirement that restaurants be required to post no smoking signs in their establishments.

On the other hand, we did not find support for the "enforcement" aspects of the ordinance. As you can see in Table 3, it appears that residents are

more indifferent to the aspects of the ordinance that require citizens to complain and that do not require managers to report violations or to ask violators to stop smoking. In fact, more people oppose than support the aspects of the ordinance that do not require managers to take action against violators, although the attitude ratings for these two items averages to about 3 indicating "indifference."

In sum, we found that residents are generally supportive or the ordinance as a whole, are generally supportive of the "context" aspects of the ordinance, and are generally indifferent or opposed to the "enforcement" aspects of the ordinance. The next section reports on resident attitudes about possible individual extensions of the ordinance.

Which extensions of the ordinance would residents of Dallas support?

We asked respondents to indicate their support for or opposition to five possible extensions of the ordinance. As in the attitude measures of actual aspects of the ordinance, we measured opinions toward extensions on a 5-point scale (with 1 being strongly support and 5 being strongly oppose). Table 4 (attached) presents the mean ratings and standard deviations of these five questions as well as the percentages of support, indifference, and oppose responses obtained.

Three of the extensions received moderate to strong support whereas two of the extensions received indifferent or oppostional responses. The three possible extensions which received support were: (1) management should be required to enforce the ordinance, (2) restaurants must designate a certain

percentage of their space as non smoking, and (3) employers should provide no smoking areas at work. The restaurant extension appears to have received the strongest support from the respondents ($\bar{X}$=1.5, 91 percent support) although the question did not specify a particular percentage of space that would be designated no smoking. The management enforcement extension also seems to have received strong support ($\bar{X}$=1.7, 82 percent support). This finding is not surprising given the fact that most respondents already believed that management did have the enforcement power, as indicated in our true-false test. Finally, the extension that employers should provide no smoking areas at work also received support ($\bar{X}$=1.9, 77 percent support).

The two extensions that did not receive support from our respondents included: (1) police should enforce the ordinance and (2) city officials should ticket violators of the ordinance. The mean ratings for these items were 2.8 and 2.5 respectively and the percentages of support for and opposition to these extensions were split (46 percent support/41 percent oppose for police; 58 percent support/32 percent oppose for city officials. In sum, although respondents in our sample are not supportive of the current enforcement aspects of the ordinance, they do not generally support enforcement by police or by city officials who issue tickets.

CONCLUSIONS

Before drawing any conclusions from this survey, its limitations must be stressed again. The sample is not completely representative of the

demographic characteristics of city of Dallas residents. Instead, this sample represents citizens who are younger, white, with higher than average levels of education and income. More research should be conducted to obtain input from minority and Hispanic residents if city officials wish to use this information as a basis for generalizing about city of Dallas citizen response to the city smoking ordinance. On the other hand, the attitudes of this sample of generally younger, white, more highly educated people with higher incomes may serve as a predictor of sorts of community support for the ordinance.

The results of this post campaign survey are of use to public relations researchers and practitioners. The use of cognitive, attitude, and behavior variables provides more specific information about the messages that should be employed if the city wishes to inform residents about the ordinance or attempt to gain support from residents for possible extensions of the ordinance.

The results, particularly, with regard to the two cognitive variables -- awareness and knowledge, suggest that learning whether respondents are aware could be two simplistic a measure. The results of the survey do indicate that people have a high level of awareness of the smoking ordinance. They are at least "generally" aware that such an ordinance exists. Consequently, the findings do not indicate that the city needs to increase the residents' general awareness of the ordinance.

The results of this survey suggest that the residents' knowledge of the ordinance is incomplete. Generaly, they know the <u>contexts</u> in which the

ordinance applies but they are not knowledgeable about the enforcement aspects of the ordinance. This finding is disheartening, given that residents must know about the enforcement provisions if they are actually to enforce the ordinance. If this knowledge of the enforcement aspects of the ordinance stays at the same low level, the city will need to focus its efforts on informing the public about how to enforce the ordinance. Also, these results support our assumption that if respondents are not knowledgeable about an issue than they will not be interested in supporting or changing it.

In general, the respondents supported the city smoking ordinance and some proposed extensions. It is positive news that this sample was generally receptive to the ordinance. The results suggest that there may be a favorable climate for extending the ordinance, at least from those citizens who have higher incomes and education levels.

Our survey found evidence that people who believe that other peoples' smoke is dangerous to their health are more supportive of the ordinance as a whole. This finding suggests that the perceived health risk of secondary smoke may be the best predictor of support for the ordinance and extensions of the ordinance. We believe that an important first step in gaining support for extensions of the ordinance, then, is to inform residents of the actual health risks of secondary smoke.

The characteristics measured beyond demographic information, such as smoking status and whether people believed that other peoples' smoke is dangerous to their health provide further insight into the cognitive

structures described by Schneider as imperative to know when designing messages. Indeed, our data substantiated the claim for understanding the schemata of the receivers -- to certainly go beyond merely assessing demographic characteristics.

Finally, the results suggest that city efforts to publicize the smoking ordinance by the city water bill were perhaps not very cost-effective. Our findings indicate that residents were much more likely to have received information about the ordinance from the television, radio, and newspaper media. If the city seeks to make changes to the existing smoking ordinance, it should focus its campaign efforts on placing stories in these mass media.

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TABLE 1: COMPARISON OF
DEMOGRAPHIC CHARACTERISTICS

Demographic Factor	1982 Census Estimates	Survey Sample Estimates
Gender	Male = 48% Female = 52%	Male = 51% Female = 49%
Race	White = 57% Black = 29% Hispanic = 12% Asian = .8% Other = 1%	White = 69% Black = 17% Hispanic = 12% Asian = 2% Other = 1% No Ans = 4%
Education	Elementary = 15% Some H.S. = 16% H.S. Grad = 28% Some College = 19% College Grad = 22%	Elementary = 3% Not Applicable H.S. Grad = 21% Some Colege = 35% College Grad = 36% No Answer = 5%
Age	18-24 = 20% 25-34 = 26% 35-44 = 15% 45-54 = 13% 55+ = 25%	18-24 = 18% 25-34 = 32% 35-44 = 19% 45-54 = 11% 55+ = 15% No Ans = 5%
Income	0-10K = 21% 11-19K = 30% 20-34K = 29% 35-49K = 11% 50K+ = 9%	0-15K = 11% 16-26K = 32% 27-46K = 31% 47K+ = 19% No Ans = 10%

Note: 1982 census data estimates have been collapsed to correspond with categories from our sample.

TABLE 2: CORRECT AND INCORRECT RESPONSES TO KNOWLEDGE QUESTIONS

Question	Correct %	Incorrect %
1. Smoking is prohibited in hospital hallways. (T)	62%	38%
2. Smoking is prohibited in work areas in offices. (F)	42%	58%
3. Smoking is prohibited in retail establishments. (T)	68%	32%
4. Restaurants are required to have nonsmoking sections. (T)	89%	11%
5. Establishments are required to post no-smoking signs. (T)	74%	26%
6. Complaints against violations are enforced by police. (F)	25%	75%
7. Establishment managers are required to report violations. (F)	17%	83%
8. Establishment managers are required to ask violators to stop smoking in no-smoking areas. (F)	4%	96%

TABLE 4: ATTITUDES TOWARD EXTENSIONS OF ORDINANCE

Extension of Ordinance	X (SD)	Support %	Indiff %	Oppose %
1. Management should be required to enforce.	1.7 (1.1)	82%	7%	11%
2. Police should enforce ordinance.	2.8 (1.5)	46%	13%	41%
3. City officials should ticket violators.	2.5 (1.4)	58%	10%	32%
4. Restaurants must have % of space non-smoking.	1.5 (.97)	91%	3%	6%
5. Employers should provide no-smoking areas.	1.9 (1.2)	77%	10%	13%

TABLE 3: ATTITUDES TOWARD ASPECTS OF ORDINANCE

Aspect of Ordinance	$\bar{X}$ (SD)	Support %	Indiff %	Oppose %
1. Smoking is prohibited in hospital hallways.	1.6 (1.0)	87%	5%	9%
2. Smoking is prohibited in retail establishments.	1.8 (1.2)	80%	8%	12%
3. Restaurants must have nonsmoking sections.	1.5 (.87)	91%	5%	4%
4. Establishments must post no-smoking signs.	1.6 (.92)	87%	9%	5%
5. Violations enforced on complaint basis only.	2.6 (1.3)	55%	17%	28%
6. Managers not required to report violations.	3.1 (1.4)	38%	18%	45%
7. Managers not required to ask violators to stop smoking.	3.4 (1.5)	32%	9%	59%
8. Attitude toward ordinance as a whole	1.8 (1.1)	81%	9%	10%